

AACTAGATGCAGCACCACAATCACTACCACGTACCAATCATATACCAATAATGTACTAATAATGTACCAATAACTATGGTTTATAAGATGGTGCATTAAATCAATATTAGTTCCTTATATTA 125
M V S F K S I L V P Y I

CACTCTTTTAAATGAGCGTGTCTTTGCAAGTGATACCGATCCCGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGGAACTGTTGGGCCAGTGAAGCTGGTGGGCTAGTGAAGCT 250
Repeat Sequences
T L F L W S G A V F A S D T D P E A G G P S E A G G P S G T V G P S E A G G P S E A

GGTGGGCTAGTGGAACTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGGAACTGGTGGGCTAGTGAAGCT 375
Repeat Sequences
G G P S G T G W P S E A G G P S E A G G P S E A G G P S E A G G P S G T G W P S G T

TGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCTGGTGGGCTAGTGAAGCT 500
Repeat Sequences
G W P S E A G W S S E R F G Y Q L L P Y S R R I V I F N E V C L S Y I Y K H S V W

TATTGGAACGAGATAGGGTGAACGATGGTCATAAAGACTACATTGAAGAAAAACCAAGGAGAAGATAAATTGAAAAAGATTGAAAAATGTTTCTGGAACAATATCCCTTATGAAGAAA 625
I L E R D R V N D G H K D Y I E E K T K E K N K L K K E L E K C F P E Q Y S L M K K

GAAGAATTGGCTAGAATATTTGATAATGCATCCACTATCTCTTCAAAATATAAGTTATTGGTTGATGAATATCAAAAGGCCATGGTACATTGGAAGGTCAGCTGCTGATAATTTGACCA 750
E E L A R I F D N A S T I S S K Y K L L V D E I S N K A Y G T L E G P A A D N F D H

TTCCGTAATATATGGAAGCTATTGTACTTAAAGATATGTTATATATTGTGACTTATTATTACAACATTAATCTATAAATCTATTATGACAATACCGTTAATGATATCAAGAAAAATTTG 875
F R N I W K S I V L K D W F I Y C D L L L Q H L I Y K F Y Y D N T V N D I K K N F

ACGAATCCAATCTAAGCTTTAGTTTGGGGATAAGATCACTAAAAAGGATGGAGATTATAACACTCATTTTGAGGACATGATTAAGGAGTTGAATAGTGCAGCAGAAGATTTAATAAAAT 1000
D E S K S K A L V L R D K I T K K D G D Y N T H F E D M I K E L N S A A E E F N K I

GTTGACATCATGATTTCCAACATTGGGATTATGATGAGTATGACAGTATTGCAAGTTTCAACCATTTCTTTCAATGATCACCGAAATCACTAAAATCACCAGGTTTCTAATGTAATAATTCC 1125
V D I W I S N I G D Y D E Y D S I A S F K P F L S W I T E I T K I T K V S N V I I P

TGGAATTAAGGCACTAACTTTAACCGTTTTTTTAAATTTTATTACAAAATAGATGTAATACCAGATGTATACATTATTATATATTACAAAATTACACATTATTTATGTATGAACGAACGAACAT 1250
G I K A L T L T V F L I F I T K

Fig. 1A

| | |
|---|------|
| <u>CTCAGTCTTAAATGAAGAAATGGGATAAATAGATTAAAGTAACATGAGAAAGATGAATATAATATTAGAATATGAAATTTACAGAAATAAAATGAAGTAAAGAGTGTATTTGT</u> | 1375 |
| <u>AATAATTATAATAAATTAGTATACAATGATTATATTACAGATGACTATTGATTATTGTATCAATTAATATTGATTATTATGATATCATATATGTATATGTTAATGATTGATTGTATACGT</u> | 1500 |
| <u>TGTGAATATGTTATATAATGACATACTATAATAATTAATATAATGTAGAGGATATTTTTTAATAGTATTTAATGAATATTATAGTTATAATTATAATAATGTAGATAAAAAATGACATTAATTT</u> | 1625 |
| <u>GAATGTTAAATGAAATGTATGTAATAATATGTTTATAATCTGAATTGATTAATAATATAATTTCTACAATTAATTTTGTAAATTATAATAATGATTATATTAATCTTTGAATTATT</u> | 1750 |
| <u>ATAAATAATATTACTTCATTAAATTTTACATAAATTTCCAAATTATTATCCTTTATCTTAATGTTATCCAATTTACACATCTTCTTCATTACAATATTTTTTACTAATCCTGTATGC</u> | 1875 |
| <u>TCATATTCATATTTCTTAGAAATATAACGAAATTAGATGTAACCTCGCCACTTACAAGTAAACTACCATCAATATAATAATGAATACCATTGATGCCGTATATCTTTATATTTTTATC</u> | 2000 |
| <u>ATATTTTATTTTGTGATTATTCATTCAATGAGAGAAATAATAGCAGAAAGATCCTTCTATAGAAACATAAAATTCATTAATACTGGATTATTATGTTTGAAGTATA</u> | 2125 |
| <u>GATGTTAAATCAATAACACTACCGTTGGTAATTTAGCATTGTCATCAATTTCAATTATATAATCAGAAATTTTGATTTTATCAATTTTATTCGGATGTGATAATTTATTTGTTCTGATTCAT</u> | 2250 |
| <u>CGATCATGTATACAAATACTATTGTTAAAGGTTCCCTATCCTTATAATTAAGTGCCCAATAAGATTGGCATTAAATACATTAGTAGTGTGTATTGTAATAGTATCATTAGTGGTACTGACA</u> | 2375 |
| <u>GTTGTTATAGGTTTTGATTCCATAATGAACATCATTTTATCTACACAATACA</u> | 2430 |

Fig. 1B

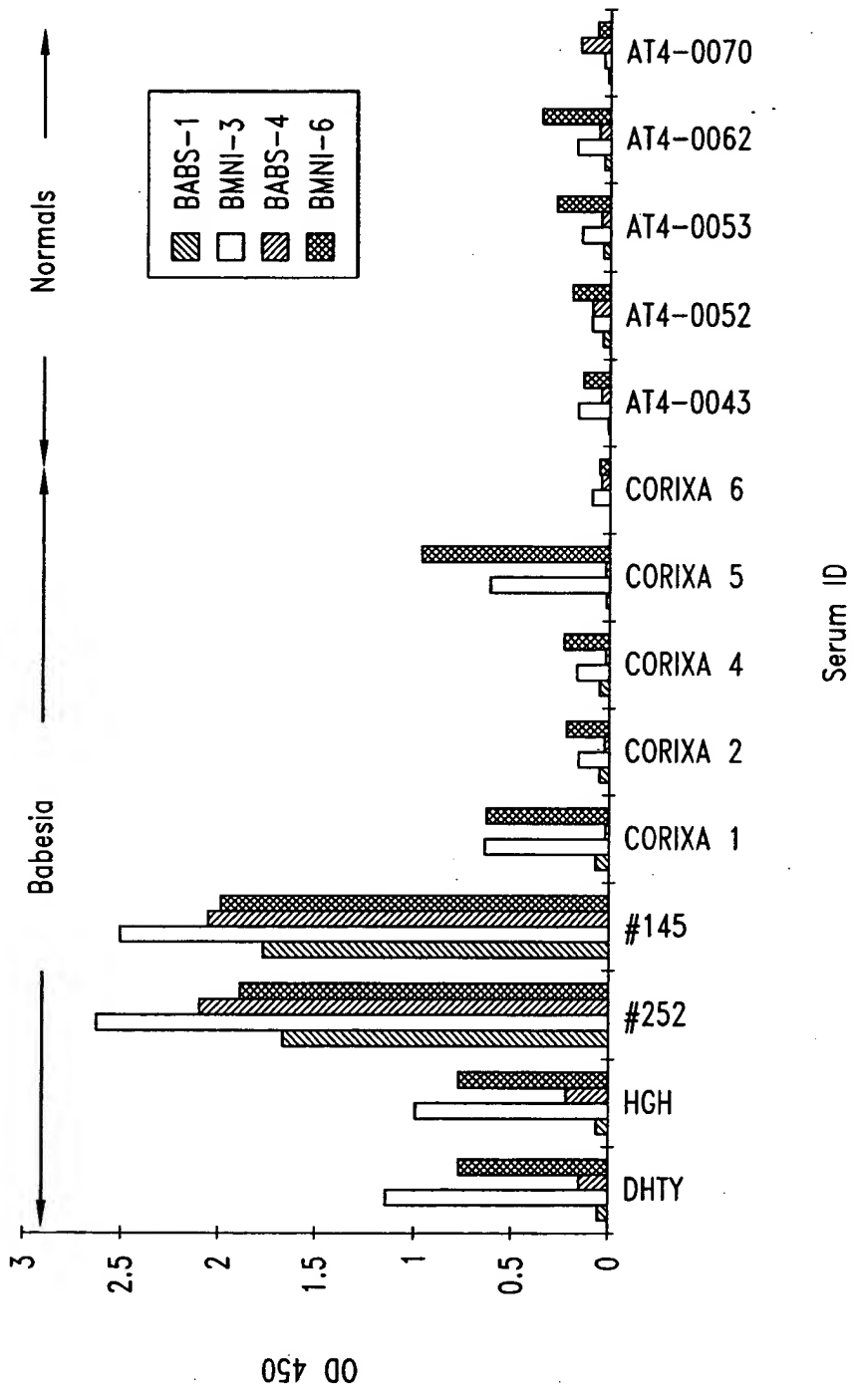


Fig. 2A

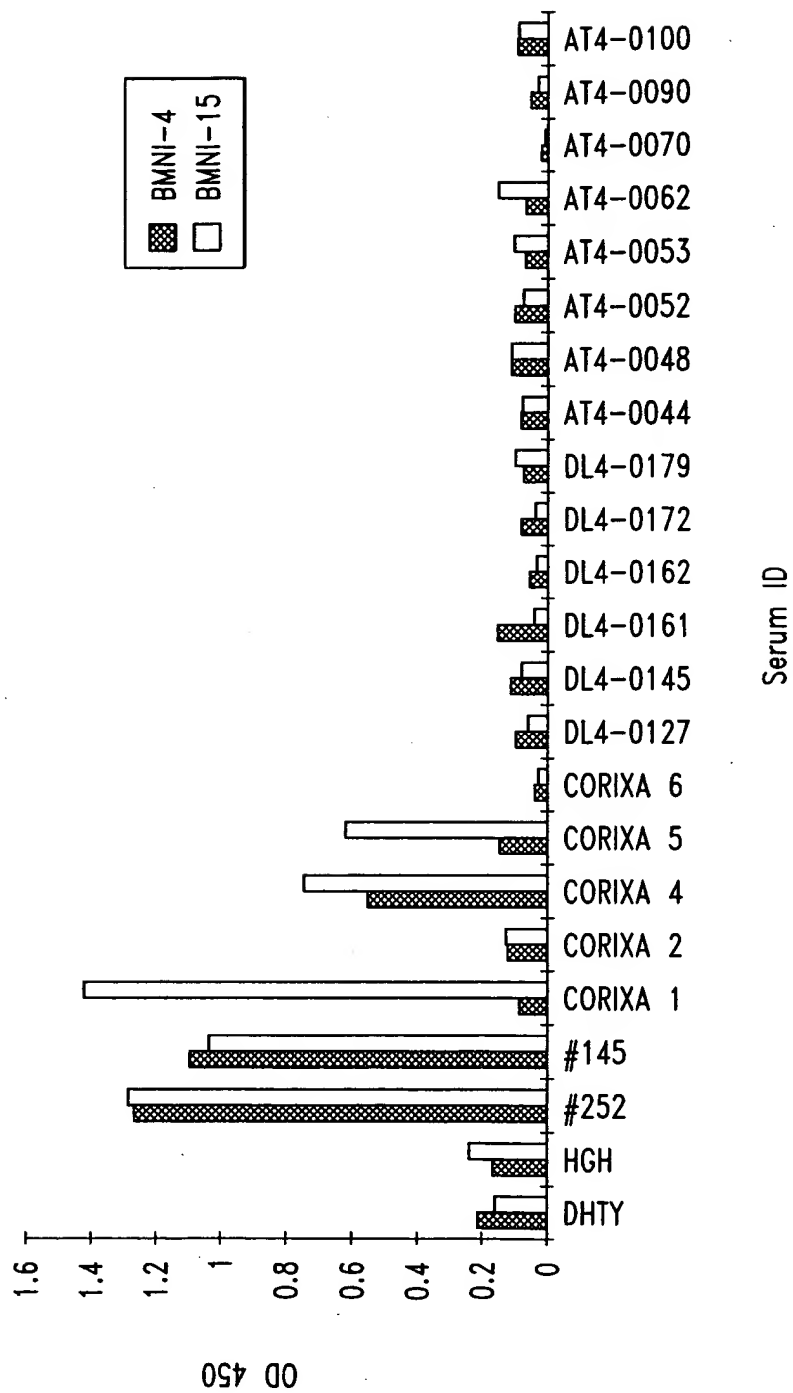


Fig. 2B

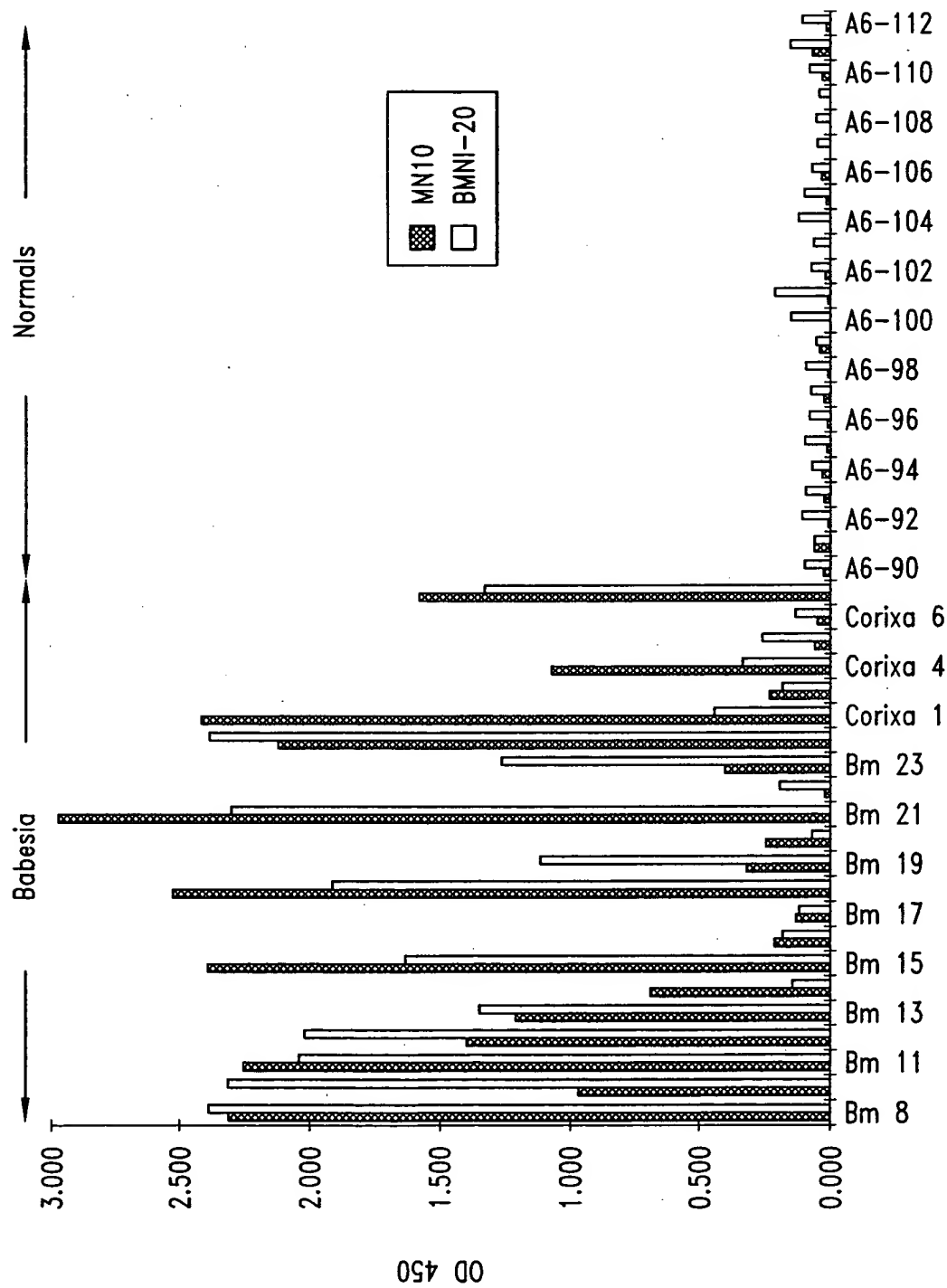


Fig. 3

Serum ID

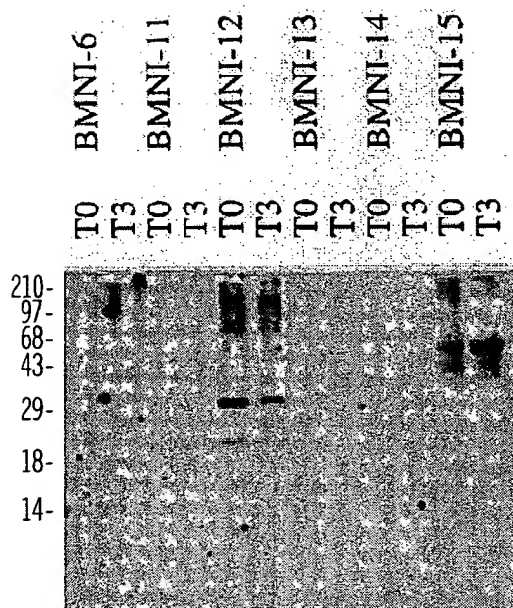
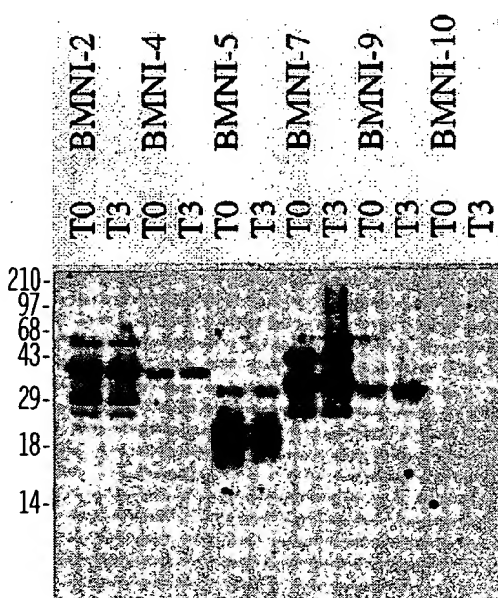


Fig. 4

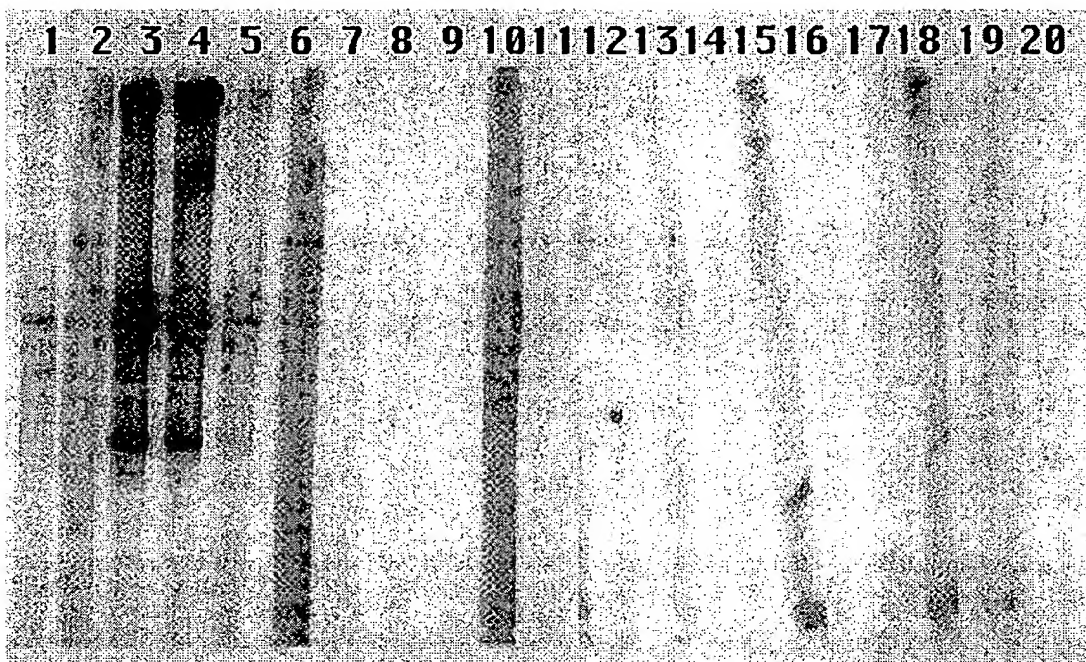


Fig. 5

| | | | | | |
|--------|------------|------------|------------|------------|-----------------------|
| BI254 | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | ..... |
| BI1053 | ..... | ...GDTDREA | GGPSGTVGP. | ..... | ..... |
| BI2227 | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | .SEAGGPSEA |
| BI2259 | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | .SEAGGPSEA |
| BI2253 | ..... | .....EA | GGPSGTVGP. | ..... | .SEAGGPSEA |
| GRAC,S | ..... | ...GDTDREA | GGPSGTVGP. | ..... | SEAGG PSEAGGPSEA |
| FISH,S | ..... | ..AGDTDREA | GGPSGTVGPS | SAGGPSEAGG | PSEAGGPSEA |
| MN1HAM | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | .....SEA |
| MN2 | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | ..... |
| MN1PAT | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | .....SEA |
| Bmni-6 | YITLFLMSG | VFAGDTDREA | GGPSGTVGP. | ..... | .....SEA |
| MN3 | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | .SEAGGPSEA |
| MR.T | ..... | ..AGDTDREA | GGPSGTVGP. | ..... | .SEAGGPSEA |
| | 51 | | | | 100 |
| BI254 | ... | SEAGGPS | EAGGPSGTVG | PSEAGGPSEA | GGPSGTGWPS EAGGPSGTVG |
| BI1053 | ... | SEAGGPS | EAGGPSGTVG | PSEAGGPSEA | GGPSGTGWPS EAGGPSGTVG |
| BI2227 | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSEAGW |
| BI2259 | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSEAGW |
| BI2253 | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSEAGW |
| GRAC,S | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSEAGW |
| FISH,S | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSEAGW |
| MN1HAM | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSGTGW |
| MN2 | ... | SEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS EAGGPSGTGW |
| MN1PAT | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSGTGW |
| Bmni-6 | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSHAGGPS | EAGGPSGTGW |
| MN3 | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSGTGW |
| MR.T | GGPSEAGGPS | EAGGPSEAGG | PSEAGGPSEA | GGPSEAGGPS | EAGGPSGTGW |
| | 101 | | | | 150 |
| BI254 | PSEAGGP... |S | EAGGPSGTGW | PSGTGWSEV | GWPSEFRGYQ |
| BI1053 | PSEAGGP... |S | EAGGPSGTGW | PSGTGWSEV | GWPSEFRGYQ |
| BI2227 | PSEAGWPSEA | GGPSGTGWPS | EAGWPSEAGW | PSEAGWPSEA | GW..... |
| BI2259 | PSEAGWPSEA | GGPSGTGWPS | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |
| BI2253 | PSEAGWPSEA | GGPSGTGWPS | EAGWPSEAGW | PSEAGWPSEA | GWPSE.... |
| GRAC,S | PSEAGWPSEA | GGPSGTGWPS | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |
| FISH,S | PSEAGWPSEA | GGPSGTGWPS | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |
| MN1HAM | PSEAGWP... |S | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |
| MN2 | PSEAGWP... |S | EAGWPSEAGW | PSEAGWPSEA | GW..... |
| MN1PAT | PSEAGWP... |S | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |
| Bmni-6 | PSEAGWP... |S | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |
| MN3 | PSEAGWP... |S | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |
| MR.T | PSEAGWP... |S | EAGWPSEAGW | PSEAGWPSEA | GWPSEFRGYQ |

Fig. 6A

| | 151 | 177 |
|--------|-------------------------------|-----|
| BI254 | LLWYSRRIVI | |
| BI1053 | LLWYSRRIVI | |
| BI2227 | ..... |  |
| BI2259 | LLWYSRRIVI | |
| BI2253 | ..... |  |
| GRAC,S | LLWYS..... | |
| FISH,S | ..... |  |
| MN1HAM | LLWYSRRIVI | |
| MN2 | ..... |  |
| MN1PAT | LLWYS..... | |
| Bmni-6 | LLWYSRRIVI FNEIYLSHIY EHSVMIL | |
| MN3 | LLWYSR.... | |
| MR.T | LLWYSR.... | |

Fig. 6B